The triple burden experienced by incarcerated people in British Columbia: Mental illness, substance use, and poverty

Comprehensive treatment for mental illness and substance use disorder is needed in provincial correctional centres, and postrelease supports must link people with housing, education, and employment opportunities.

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ABSTRACT

Background: People transitioning from incarceration into the community often experience adverse health outcomes driven by the social determinants of health. This study aimed to compare the prevalence of mental health and substance use disorders and their associations with poverty and housing instability among people incarcerated in British Columbia provincial correctional centres versus the general community population.

Methods: We used linked administrative data on a random 20% sample of BC residents enrolled in public health insurance. Individuals with any provincial incarceration in 2015 or 2021 were identified and compared with nonincarcerated individuals in those years. Prevalence of mental illness, substance use disorders, and indicators of social disadvantage (income assistance, no fixed address) were calculated for both groups. In 2021, the sample included 1933 incarcerated people and 962 421 nonincarcerated people.

Results: Incarcerated people had significantly higher rates of mental illness and substance use disorder (including opioid and stimulant use disorders) than the community population. In 2021, 51.1% of incarcerated people had a diagnosed mental illness, 58.9% had a substance use disorder, and 41.0% had both. Co-occurring mental illness and substance use disorder were frequently associated with extreme poverty and housing instability. Nearly one-third (32.5%) of incarcerated people in 2021 had co-occurring mental illness and substance use disorder *and* either received income assistance or had no fixed address. Mental illness, substance use disorder, and poverty were much less common in the community cohort.

Conclusions: Incarcerated people in BC experience a triple burden of mental illness, substance use disorders, and socioeconomic marginalization (poverty and homelessness). There is an urgent need for targeted interventions during incarceration (e.g., evidence-based mental health and substance use disorder treatment) and greater postrelease support (housing, social services, and employment opportunities) to reduce health inequities and break the cycle of recidivism.

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Background

Health outcomes in Canada are shaped more by social determinants such as income and housing than by genetics or access to care.[1-3] Social determinants are especially influential for people who are experiencing mental illness and substance use disorders.[4-7] The COVID-19 pandemic intensified pressures on housing affordability, food insecurity, and homelessness across Canada.[8-10] In British Columbia, where housing costs are the highest in Canada, these pressures have evolved into a province-wide "cost of living crisis."[9-12] These challenges are not experienced equally across the population.[13] People who are already experiencing social, economic, and health inequities are more likely to bear the burden of rising inequalities, which leads to outcomes such as premature mortality.[13]

Although the links between poverty, housing insecurity, and health are well established, little research has examined how these factors are associated with incarceration in Canada. Incarcerated people have distinct and often complex health profiles, but population-level evidence remains sparse.[4,5] In 2023–2024, 96.2% of admissions to Canadian correctional centres were to provincial or territorial facilities, which house people who are awaiting trial or serving sentences of less than 2 years.[14] In 2024, there were 9701 admissions to provincial correctional centres in BC.[15] People incarcerated in provincial correctional centres can quickly cycle between pretrial correctional centres, hospitals, and homelessness when released back into the community, which contributes to elevated rates of overdose mortality in the 2 weeks postrelease.[16] Unlike in the federal correctional system, there is no gradual return to community for people incarcerated in provincial correctional centres, and people can be released quickly from court without prescriptions or a warm handoff.[17] Understanding the associations between incarceration and social determinants of health is critical for designing health and social services that address the structural inequities experienced by incarcerated people that contribute to health outcomes, recidivism, and reintegration.

This study sought to measure the prevalence of mental illness, chronic diseases, and substance use disorder among incarcerated and nonincarcerated people in BC; assess changes in the prevalence of these conditions between 2015 and 2021; and describe how poverty and housing instability are associated with health conditions among incarcerated people.

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Methods

Data source

Data were obtained from the BC Provincial Overdose Cohort (BC-ODC), a linked administrative database that includes a reference cohort that contains a 20% random sample of residents enrolled in BC's public health insurance program. Each person was assigned a unique identifier to facilitate linkage across administrative data sets, including physician billing claims, hospitalizations, emergency department visits, pharmacy dispensations, provincial incarceration records, social assistance records, and death registrations. Longitudinal data were available from 1 January 2010 to 31 December 2021. Further details on the BC-ODC are available elsewhere.[18] People included in the BC-ODC were identified as incarcerated in 2021 if they had a BC Corrections admission that year. If they did not, they were assigned to the nonincarcerated group in 2021. This was repeated for 2015 to compare results from 2021 and 2015. This study was approved by the UBC Behavioural Research Ethics Board (#H23-02009).

Measures

For each individual in the sample, data from the previous 5 years were used to determine substance use conditions, withdrawal syndrome, and social determinants of health (income assistance and no fixed address). Chronic physical health conditions (circulatory disease, diabetes, inflammatory disease, kidney disease, neurological disease, and respiratory disease) were determined using all available years of data beginning from 1 January 2010. The reference time frame ended on 31 December of the record year (2015 or 2021) for people who were not incarcerated and the day before admission to a correctional centre for people who were incarcerated. Definitions of terms used throughout the article are provided in a Supplementary Information file at bcmj.org.

Statistical analysis

Descriptive statistics were used to calculate the prevalence of health conditions and social determinants of health in the two groups (incarcerated and nonincarcerated) and for the 2 years under study (2015 and 2021). A two-sample binomial test of proportions with a two-sided alternative hypothesis was used to identify a statistically significant difference in the prevalence of a health condition between incarcerated and nonincarcerated groups. Because we aimed to describe the health status of the overall population of correctional centres and the community, we did not match or adjust for age or sex differences between the populations.

Results

The sample in 2015 included 3306 people who were incarcerated that year and 917 174 people who were not incarcerated. The 2021 sample included 1933 people who were incarcerated that year and 962 421 people who were not incarcerated. People who were incarcerated in 2021 were primarily male (n = 1753, 91%), and the median age was 35 years (IQR: 29, 43). In contrast, the nonincarcerated (community) group was 49% male (n = 475 368) and had a median age of 47 years (IQR: 32, 63).

In 2021, all substance use disorders were more prevalent among incarcerated people than those who were not incarcerated. Substance use disorder occurred among 58.9% of incarcerated people versus 3.2% of nonincarcerated people ($P < .001$). Opioid use disorder occurred in 41.4% of incarcerated people compared with 1.2% of nonincarcerated people ($P < .001$). The prevalence of chronic physical conditions was either similar between incarcerated and nonincarcerated people or higher among the nonincarcerated group, which could be attributed to population demographic characteristics. From 2015 to 2021, opioid use disorder, stimulant use disorder, substance use disorder, substance withdrawal, and mental illness all became more prevalent among incarcerated people **[Figure 1]**.

Mental illness and substance use disorder commonly co-occurred among those with no fixed address who were receiving social assistance. In 2021, 51.1% of incarcerated people had been previously diagnosed with a mental illness, while 36.7% had a mental illness and no fixed address and/or were receiving social assistance **[Figure 2]**. Similarly, 58.9% of incarcerated people had substance use disorder, and 43.4% had both substance use disorder and a record of no fixed address and/or social assistance. In 2021, mental illness and substance use disorder co-occurred among 41.0% of incarcerated people, and 32.5% had co-occurring mental illness, substance use disorder, and no fixed address and/or social assistance.

Discussion

This study shows that in BC, incarcerated people face a disproportionate burden of mental illness, substance use disorders, and socioeconomic disadvantage compared with people who are not incarcerated. Incarcerated people were younger than nonincarcerated people, and although they had fewer chronic physical conditions, they had a far higher prevalence of mental illness and substance use disorder. These conditions were frequently associated with income assistance and housing instability, which

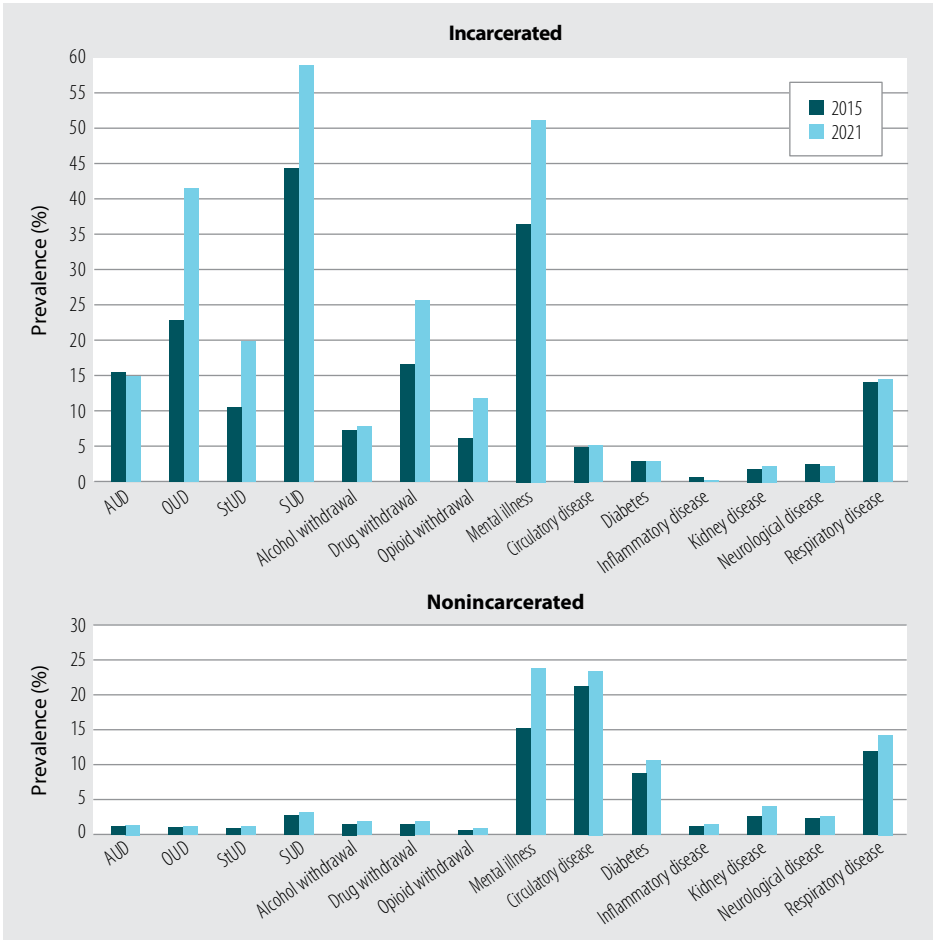

FIGURE 1. Changes in the prevalence of selected health conditions between 2015 and 2021 for incarcerated and nonincarcerated people in British Columbia.
AUD = alcohol use disorder; OUD = opioid use disorder; StUD = stimulant use disorder; SUD = substance use disorder.

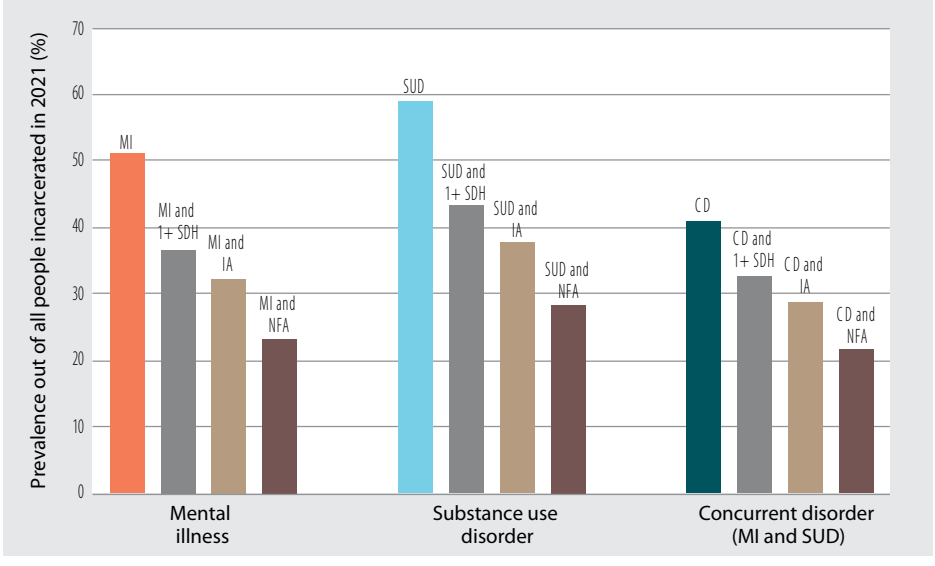

FIGURE 2. Prevalence of co-occurring health conditions and social determinants of health for people incarcerated in 2021.
MI = mental illness; 1+ SDH = at least one social determinant of health (either income assistance or no fixed address or both); IA = income assistance; NFA = no fixed address; SUD = substance use disorder; CD = concurrent disorder (both mental illness and substance use disorder).

created a triple burden of health and social inequities.

Additionally, the prevalence of mental illness and substance use disorder among incarcerated people increased between 2015 and 2021. Rates of mental illness and co-occurring substance use disorder are increasing in BC's provincial correctional system, often in combination with homelessness and poverty postrelease. Prior research has described "social sedimentation," where health inequities concentrate among low-income groups and reproduce across generations.[13] Poverty and housing insecurity are linked to recidivism risk.[19] People in BC who have concurrent disorders have among the highest reincarceration rates: 72% return to custody within 3 years.[20] Correctional facilities provide a key point of intervention to reverse cycles of disadvantage. Robust prerelease discharge planning is urgently needed in provincial institutions to ensure people leaving custody have access to stable housing, health care, income supports, employment, and education services.

Study limitations

Our study had several limitations. We conducted a descriptive, population-based study using linked administrative data. We did not adjust for demographic differences between the incarcerated and nonincarcerated groups, because our goal was to describe entire populations rather than estimate adjusted effects. Our estimates reflect 2015 and 2021 trends among a random sample of people enrolled in public health insurance in BC. Custody volumes and health care delivery inside and outside of correctional centres changed during the COVID-19 pandemic.[21] Since 2021, the toxic drug crisis has also intensified, and the association between substance use disorder, homelessness, and postrelease overdose risk could be underrepresentative of the postpandemic period.[16]

Conclusions

Incarceration is a critical time to disrupt entrenched cycles of poverty. Resources are needed to implement comprehensive mental illness and substance use disorder treatment in provincial correctional centres and the community. Postrelease supports must be strengthened, with a focus on linking people with housing, education, and employment opportunities alongside expanded access to community-based mental health and substance use disorder treatment. ■

Incarceration is a critical time to disrupt entrenched cycles of poverty.

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Competing interests

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